
EIR Proposal

Exchange Information Requirements (EIR) - the EIR are detailed information requirements shared with Lead Appointed Parties for tender and Appointment Proposal

1 Introduction

1.1 Document scope

The present document, hereinafter EIR (Exchange Information Requirement), is a pre-tender document that defines objectives, uses and expected results of the BIM process in the Project, along with a detailed design of the process for executing BIM throughout the project lifecycle.

In response to this document, the Lead Appointed Party should provide the required BIM, IT and Resource assessment forms.

Subsequently, a BIM Execution Plan (BEP) and a Master Information Delivery Plan (MIDP) shall be prepared by the Lead Appointed Party.

1.2 Project Information

Project Overview data:

Appointing Party	KAITECH
Project Name	KT-School
Project Location	Egypt
Project Code	KT-R08

1.3 Abbreviations

List of abbreviations:

BEP	BIM Execution Plan
BIM	Building Information Modeling
BOQ	Bill of Quantities
CDE	Common Data Environment
COBie	Construction Operations Building Information Exchange
EIR	Exchange Information Requirements
IFC	Industry Foundation Classes
MIDP	Master Information Delivery Plan
PIM	Project Information Model
QA/QC	Quality Assurance/Quality Control

Ref: <https://bimdictionary.com/>

2 Technical Information

2.1 Standards

In order to establish a consistent approach to collaboration, the Appointing Party requires the Lead Appointed Party and Associated Appointed Parties to be aware of and follow the guidance provided in the following recognized standards and best practice documents during all stages of the project.

Standard Title Concepts and Principles

BS EN ISO 19650-1:2018	Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling. ISO 19650-1:2018
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Delivery Phase of the Assets

BS EN ISO 19650-2:2018	Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) —
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Information management using building information modelling.
[ISO 19650-2:2018](#)

Operational Phase of the Assets

BS EN ISO 19650-3:2020 Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling.
[ISO 19650-3:2020](#)

Security-minded Approach to Information Management

BS EN ISO 19650-5:2020 Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling.
[ISO 19650-5:2020](#)

BS 1192-4:2014 Collaborative production of information. Fulfilling employer's information exchange requirements using COBie. Code of practice.
[BS 1192-4:2014](#)

PAS 1192-6:2018 Specification for collaborative sharing and use of structured Health and Safety information using BIM.
[PAS 1192-6:2018](#)

Uniclass 2015 all industry sectors can easily access in a common format. It is a requirement for BIM projects (set by the BS EN ISO 19650 series). [NBS : Uniclass 2015](#)

2.2 Software Platforms

The use of a specific software tool is not mandatory, however, any software proposed for this project must be approved and added to the software table in this section prior to use.

Approved software platforms to be used in the project shall be listed in the BEP, defining the software version, language, file format and model use, according to the following table:

Role	Software	Version	Language	File Format
Architectural Modelling	Revit	2021	English	.rvt
Structure Modelling	Revit	2021	English	.rvt
MEP Systems Modelling	Revit	2021	English	.rvt
VR	Enscape/Lumion		English	
Common Data Environment	BIM 360		English	
Clash Coordination	Navisworks	2021	English	Nwd
4D/5D	Navisworks	2021	English	Nwd/Video
Quantity Takeoff	Revit	2021	English	.rvt
AR	Augin		English	

2.3 System performance constraints

The following requirements apply to the exchange of information:

1. Models size should never exceed 300 Mb;
2. Other deliverables size should never exceed 100 Mb;
3. Upload submissions using the naming standard supplied by Kaitech on the classroom platform.
4. Detach all models before uploading on classroom

The Lead Appointed Party shall propose further details about exchange formats between different disciplines in the BEP. The information exchange process will take place in the Common Data Environment (CDE), where the Lead Appointed Party will be responsible to upload the documents and fill all related initial metadata .

2.4 Coordinates

Project Base point is the intersection of two axis chosen by two groups and authorised by Kaitech

2.5 Units

International metric system shall be applied. Every model uses the following project units:

Quantity	Units	Format	Example
Length	Meters (m)	0.000	1.2345 m
Area	Meters Squared (m ²)	0.00	1234.56 m ²
Volume	Meters Cubed (m ³)	0.00	1234.56 m ³
Angle	Degrees (°)	0.00	12.34°
Slope	Degrees (°)	0.00	12.34°
Currency	Pounds Sterling (£)	0.00	£1234.56
Mass Density	Kilograms/ Meters Cubed (kg/m ³)	0.00	1234.56 kg/m ³

Units of measurement for construction elements according to the project discipline.

© 2.6 BIM Uses

BIM Modeling

Coordination

Drawings /Quantity Extraction

4D/5D

AR/VR

BOQ

Facility management

TABLE 1 - RESPONSIBILITIES

	BS EN ISO 19650-2:2018	APPOINTING PARTY	LEAD APPOINTED PARTY
Review and accept the information model		X	
Submit information model for authorization			X



3.2 Naming Convention for submission

Provided by appointing party (Kaitech) for each submittal



3.3 Information Exchange

Deliverables	Responsibility		Date
	Appointing Party	Lead Appointed Party	
BEP		X	10-06-2023
TEMPLATES		X	17-06-2023
CDE		X	17-06-2023
3D MODEL _WIP		X	25-06-2023
3D MODEL _WIP		X	01-07-2023
3D MODEL _FINAL		X	08-07-2023
CALSH TEST REPORT		X	14-07-2023
DRAWINGS		X	14-07-2023
BOQ		X	14-07-2023
4D SUMILATION		X	14-07-2023
5D		X	14-07-2023
6D		X	22-07-2023
7D		X	22-07-2023
AR		X	22-07-2023
VR		X	22-07-2023

3.3 Security

All project information is to be exchanged via the CDEs and to the standard required for security-minded building information modelling, digital built environments.

3.4 Coordination and Clash Detection

Lead appointed party provide:

- 1-Clash Matrix
- 2-Coordination Workflow
- 3-Color coding for Navisworks elements

3.5 Collaboration

All team members need to collaborate and share project information. The Lead Appointed Party is required to implement and manage a project common data environment (CDE) as described in the [ISO 19650 series](#), with the purpose to facilitate collaboration and information-sharing between project team members.

Lead appointed part collaborate and share project information on BIM 360 Platform

3.6 Health & Safety and CDM

The Appointing Party expects the Lead Appointed Party to use BIM as a tool to identify and reduce health and safety related issues aligned with the different work phases.

The Lead Appointed Party should confirm that they will comply with the law to ensure projects are carried out in a way that secures health and safety. Standards and regulations to be used to manage health- and safety

QA/QC Type	DEFINITION	RESPONSIBILITY	TOOL	FREQUENCY
Visual Check	Models should be geometrically and visually accurate. This will be evident in Revit and Navisworks.	All Technicians	Revit, Navisworks and BIM360	Continuous
Clash Detection Check	Elements in respective discipline are not clashing and are coordinated with the other disciplines.	Discipline BIM Leads	Revit, Navisworks and BIM360	Fortnightly
Standards Compliance Check	Elements should be aligned with the Bep (Naming Convention & Template &&)	All Technicians and Discipline BIM Leads	Revit and Navisworks	Continuous
Model Integrity Checks	- Elements should be modelled correctly spatially and associated to the relevant references Grids and Levels. - No duplication of elements - No missing objects - No overlapping of objects	All Technicians and Discipline BIM Leads	Revit and Navisworks	Weekly